Oral Presentations

Monday, September 8, 2014

8:45-9:45 Keynote Lecture

Chair: K. Miyashita *(Faculty of Fisheries Sciences, Hokkaido University, Japan)*

L-1 Global oils and fats industry challenged by policy, sustainability, health and technology: Are solutions readily available?
K. Sundram
Malaysian Palm Oil Council (MPOC), Malaysia

9:45-10:00 Coffee Break

10:00-12:00 Morning Session

Session-1 Lipid Analysis for a New Era

Organizer: N. Gotoh *(Department of Food Science and Technology, Tokyo University of Marine Science and Technology, Japan)*

Chairs: N. Gotoh *(Department of Food Science and Technology, Tokyo University of Marine Science and Technology, Japan)*
C.C.V. Jayashinghe *(Faculty of Livestock, Fisheries and Nutrition, Wayamba University of Sri Lanka, Sri Lanka)*

O1-1 Analysis of triacylglycerol enantiomers in fish and marine mammals
N. Gotoh, T. Nagai, H. Mizobe, K. Yoshinaga, K. Kojima, F. Beppu
Department of Food Science and Technology, Tokyo University of Marine Science and Technology, Japan

O1-2 Compositions and regiospecific analysis of shark liver oils
C.C.V. Jayashinghe
Faculty of Livestock, Fisheries and Nutrition, Wayamba University of Sri Lanka, Sri Lanka

O1-3 Distribution of triacylglycerol isomers in egg yolk
K. Ishikawa, T. Nagai, H. Mizobe, K. Yoshinaga, F. Beppu, N. Gotoh
Department of Food Science and Technology, Tokyo University of Marine Science and Technology, Japan

O1-4 Free fatty acid levels and galactolipase activities of the red alga *Gracilaria vermiculophylla* under different storage conditions
M.I. Illijas[1,2], M. Terasaki[2], H. Yasui[2], N. Fusetani[2], Y. Itabashi[2]

[1]*Pangkep State Polytechnic of Agriculture, Indonesia*

[2]*Faculty of Fisheries Sciences, Hokkaido University, Japan*

O1-5 Characterization of C30 columns for determination of triacylglycerol composition by reversed-phase HPLC

T. Nagai[1], K. Yoshinaga[1], H. Mizobe[2], K. Kojima[2], F. Beppu[2], N. Gotoh[2]

[1]*R&D, Tsukishima Foods Industry Co., Ltd., Japan*

[2]*Department of Food Science and Technology, Tokyo University of Marine Science and Technology, Japan*

Session-2 Application of Surfactants in Energy, Envirtonmental Engineering, and Others

Organizer: S.-G. Oh *(Department of Chemical Engineering, Hanyang University, Korea)*

Chair: S.-G. Oh *(Department of Chemical Engineering, Hanyang University, Korea)*

O2-1 Lipid extraction from microalgae for biodiesel production

W.-C. Huang, J.-D. Kim

Department of Chemical & Biomolecular Engineering, KAIST, Korea

O2-2 Effect of combination of sucrose fatty acid ester and polyoxyethylene sorbitan fatty acid esters on stability of O/W emulsion

T. Deguchi[1], H. Hondoh[1], S. Arima[2], A. Ogawa[2], S. Ueno[1]

[1]Graduate School of Biosphere Sciences, Hiroshima University, Japan

[2]Mitsubishi-kagaku Foods Co., Japan

O2-3 Synthesis and interfacial properties of diacyl glyceric acids

S. Nagata[1], Y. Takahashi[1], Y. Kondo[1], S. Sato[2], T. Imura[2], T. Fukuoka[2], H. Habe[2], D. Kitamoto[2]

[1]*Tokyo University of Science, Japan*

[2]*National Institute of Advanced Industrial Science and Technology (AIST), Japan*

O2-4 Surfactant-assisted preparation of Mn2O3-various supporters nano hybrids and their photocatalytic activities for water treatment

S.-G. Oh, I. Jang, J.-H. Park

Department of Chemical Engineering, Hanyang University, Korea

O2-5 Emulsification by chitosan-poly(acrylic acid) complex

G.-H. Bae[1], M. Ueno[1], T. Endo[1,2], K. Sakai[1,2], H. Sakai[1,2], M. Abe[2]

[1]*Faculty of Science and Technology, Tokyo University of Science, Japan*

[2]*Research Institute for Science and Technology, Tokyo University of Science, Japan*

Session-3 Palm Oil Current Knowledge, Challenges and Future Directions Updated

Organizer: K. Sundram *(Malaysian Palm Oil Council (MPOC), Malaysia)*

Chair: K. Sundram *(Malaysian Palm Oil Council (MPOC), Malaysia)*

O3-1 Current evidence on saturated fats and CHD: Is a reassessment overdue?

J. Keenan

University of Minnesota, USA

O3-2 Neuroprotective effects of palm vitamin E tocotrienols

Y.K. Hay

School of Pharmaceutical Sciences, Universiti Sains Malaysia, Malaysia

O3-3 Wildlife conservation commitments and the role of Malaysian palm oil industry – The setting up of the wildife rescue unit as a case study

S. Nathan, D.L. Ambu

Sabah Wildlife Department, Malaysia

O3-4 Bio-wastes recovery of crude palm wax and palm fibers for waxed paper coatings to replace plastics in modified atmosphere packaging of malaysian fresh fruits: Joint malaysia-japan research-commercialisation project in low carbon oil palm eco-material.

M.K.A. Aziz[1], N.A. Morad[1], T. Okayama[2], H.L. Lam[3], M.H. Shah[4]

[1]*Malaysian Japanese Institute of Technology, Universiti Teknology Malaysia, Malaysia.*

[2]*Institute of Agriculture, Tokyo University of Agriculture and Technology, Japan*

[3]*Department of Chemical and Environmental Engineering, The University of Nottingham, Malaysia*

[4]*Department of Chemical Engineering, University Putra Malaysia, Malaysia*

O3-5 Effect of polyglycerol fatty acid esters on crystallization of palm oil due to a difference in storage temperature

Y. Murao[1], H. Hondoh[1], Y. Miyamoto[2], S. Ueno[1,]

[1]*Graduate School of Biosphere Science, Hiroshima University, Japan,*

[2]*Sakamoto Yakuhin Kogyo Co., Ltd., Japan*

12:00-13:30 Lunch

13:30-15:30 Afternoon Session-1

Session-4 Functional Lipid-Biocatalysis

Organizer: I.-H. Kim *(Department of Food & Nutrition, Korea University, Korea)*

Chairs: H.-R. Kim *(School of Food Science and Biotechnology, Kyungpook National University, Korea)*

K.-T. Lee (*Chungnam National University, Korea)*

O4-1 Biocatalysis for Enhancement of Antimicrobial Activity of 7,10-dihydroxy-8(E)-octadecenoic Acid

H.-R. Kim[1], H.-R. Son[1], J.-H. Bae[1], C.T. Hou[2]

[1]School of Food Science and Biotechnology, Kyungpook National University, Korea,

[2]Renewable Product Technology Research Unit, National Center for Agricultural Utilization Research, USDA, USA

O4-2 Chemical composition of volatile oils of mushrooms (Pleurotus species) and biotransformation of the mushroom odor component

A. Usami, M. Miyazawa

Faculty of Science and Enginnering, Kinki University, Japan

O4-3 Different oxidation and digestion degree depending on lipid structure

K.-T. Lee

Chungnam National University, Korea

O4-4 Solubility measurement of POP and SOS crystals in triolein

K. Takahashi[1], H. Hondoh[1], H. Uehara[2], S. Ueno[1]

[1]Hiroshima University, Japan,

[2]The Nisshin OilliO Group, Ltd., Japan

O4-5 Structures and binary mixing characteristics of 1,2-dipalmitoyl-3-oleoyl-sn-glycerol (sn-PPO) / 1,3-dipalmitoyl-2-oleoyl-sn-glycerol (POP) and 1,2-dipalmitoyl-3-oleoyl-rac-glycerol (rac-PPO) / (POP)

H. Mizobe[1], K. Sunagawa[2], N. Hatakeyama[1], T. Nagai[1], K. Ichioka[1], H. Hondoh[2], S. Ueno[2], K. Sato[2]

[1]Tsukishima Foods Industry Co., Ltd., Japan

[2]Graduate School of Biosphere Science, Hiroshima University, Japan

Session-5 Self-assembled Nanostructured Materials-1

Organizer: L.K. Shrestha *(International Center for Materials Nanoarchitectonics (WPI-MANA), National Institute for Materials Science (NIMS), Japan)*

Chairs: L.K. Shrestha *(WPI-MANA, NIMS, Japan)*

R.G. Shrestha *(Environment and Energy Materials Division, National Institute for Materials Science, Japan)*

O5-1 Controlling porphyrin nanoarchitectures at solid interfaces

J.P. Hill, Y. Xie, M. Akada, Y. Wakayama, Q. Ji, K. Ariga

WPI-Center for Materials Nanoarchitectonics (MANA), National Institute for Materials Science (NIMS), Japan

O5-2 Preparation of micro-rough electrodes for synthesis

K. Manandhar, D. Pletcher

Trivhuvan University, Nepal

O5-3 Three dimensional parallel assembly of two dimensional PbS sheets

S. Acharya

Centre for Advanced Materials, Indian Association for the Cultivation of Science, India

O5-4 Langmuir monolayer study of less expensive pulmonary surfactant preparations composed of egg yolk lecithin

H. Nakahara, O. Shibata

Graduate School of Pharmaceutical Sciences, Nagasaki International University, Japan

O5-5 Stimuli-responsive viscoelastic gels with phytosteryl ether surfactants

R.G. Shrestha[1], K. Sakai[2], H. Sakai[2], M. Abe[2]

[1]Environment and Energy Materials Division, National Institute for Materials Science, Japan.

[2]Faculty of Science and Technology, Tokyo University of Science, Japan

Session-6 Non-conventional Lipid Source

Organizer: K. Kangvansaichol *(PTT Research and Technology Institute, PTT PLC, Thailand)*

Chair: K. Kangvansaichol *(PTT Research and Technology Institute, PTT PLC, Thailand)*

O6-1 Overview of Non-conventional Lipid Source

K. Kangvansaichol

PTT Research and Technology Institute, PTT PLC, Thailand

O6-2 Fermentative production of polyunsaturated fatty acids and their unique transformation by gut microorganisms

J. Ogawa[1,2], E. Sakuradani[1,3], S. Kishino[1,4], A. Ando[1,2], S. Shimizu[1,5],

[1]Div. Appl. Life Sci., Grad. Sch. Agric., Kyoto Univ., Japan.

[2]Res. Unit Physiol. Chem., Kyoto Univ., Japan.

[3]Ins. Technol. Sci., Tokushima Univ., Japan.

[4]*Ind. Microbiol., Grad. Sch. Agric., Kyoto Univ., Japan.*

[5]*Fac. Bio-environ. Sci., Kyoto Gakuen Univ., Kameoka, Japan*

O6-3 Novel production of omega-3 long chain fatty acids in oilseed crops

J. Petrie, P. Shrestha, Q. Liu, A. Green, S. Singh

CSIRO, Australia

O6-4 Lipid from *Jatropha curcas* and the derived hybrids from interspecific hybridization

V. Hongtrakul

Faculty of Science, Kasetsart University, Thailand

O6-5 Hydrocarbons from microalgae

M. Watanabe

Faculty of Life and Environmental Sciences, University of Tsukuba, Japan

15:30-15:45 Coffee Break

15:45-17:45 Afternoon Session-2

Session-7 Biofuel and Oleochemicals

Organizer: I.-H. Kim *(Department of Food & Nutrition, Korea University, Korea)*

Chairs: I.-H. Kim *(Department of Food & Nutrition, Korea University, Korea)*

H.-R. Kim *(School of Food Science and Biotechnology, Kyungpook National University, Korea)*

O7-1 Production of biodiesel using blended alcohol as an acyl acceptor via enzymatic reaction

I.-H. Kim[1,2], T.T. Zhao[1,2]

[1]*Department of Food & Nutrition, Korea University, Korea,*

[2]*Department of Public Health Sciences, Korea University, Korea*

O7-2 Production of bio-oil from freshwater microalgae: TISTR scenario

A. Mahakhant[1], S. Sirisattha[1], R. Jitrwung[1], S. Khantasopa[1], M. Thungtananuwat[1], N. Jaisai[1], K. Kangvansaichol[2]

[1]*Thailand Institute of Scientific and Technological Research (TISTR), Thailand*

[2]*PTT Research and Technology Institute, Thailand*

O7-3 The production of co-processed diesel from hydrotreatment of vegetable oil and refinery stream

S. Butnark, S. Tunyapisetsak, K. Prasirtsiriphan, S. Porntangjitlikit

PTT Research and Technology Institute, Thailand

O7-4 Two-step lipase-catalyzed transesterification from acid oil for the synthesis of biodiesel

N. Choi, T.T. Zhao, D.S. No, I.-H. Kim

Department of Public Health Sciences, Korea University, Korea

O7-5 Valorization of glycerol to nonmetallic solid acid and base catalysts for biodiesel production

B.L.A. Prabhavathi Devi

Centre for Lipid Research, CSIR- Indian Institute of Chemical Technology, India

Session-8 Self-assembled Nanostructured Materials-2

Organizer: L.K. Shrestha *(International Center for Materials Nanoarchitectonics (WPI-MANA), National Institute for Materials Science (NIMS), Japan)*

Chairs: L.K. Shrestha *(WPI-MANA, NIMS, Japan)*

R.G. Shrestha *(Environment and Energy Materials Division, National Institute for Materials Science, Japan)*

O8-1 Preparation and characterization of nannostructured carbon from lapsi (choerospondias axillaries) seed for the removal arsenic and heavy metals from water

R.R. Pradhananga[1], R. Rajbhandari[2], R.M. Shrestha[2]

[1]*Central Department of Chemistry, Tribhuvan University, Nepal.*

[2]*Department of Science and Humanities, Tribhuvan University, Nepal*

O8-2 Preparation and characterization of Nanoporous Carbon from Areca catechu Nut for the Removal of Textile Dyes

S. Joshi, R.R. Pradhanang

Central Department of Chemistry, Tribhuvan University, Nepal

O8-3 Langmuir monolayer property of gemini-type partially fluorinated alkanes and their binary miscibility with DPPC

H. Nakahara[1], M.P. Krafft[2], O. Shibata[1]

[1]*Graduate School of Pharmaceutical Sciences, Nagasaki International University, Japan*

[2]*Systèmes Organisés Fluorés à Finalités Thérapeutiques (SOFFT), Université de Strasbourg, Institut Charles Sadron (CNRS), France*

O8-4 Self-assembled fullerene nanostructures

L.K. Shrestha[1], J.P. Hill[1], K. Ariga

International Center for Materials Nanoarchitectonics (WPI-MANA), National Institute for Materials Science (NIMS), Japan

Session-9 Utilization of Rice Bran Oil

Organizer: W. Tungjaroenchai (*Agro-Industry at King Mongkut's Institute of Technology Ladkrabang (KMITL), Thailand)*

Chairs: W. Tungjaroenchai (*Agro-Industry at King Mongkut's Institute of Technology Ladkrabang (KMITL), Thailand)*

T. Miyazawa *(Graduate School of Agricultural Science, Tohoku University, Japan)*

O9-1 Overview for utilization of rice bran oil

W. Tungjaroenchai

Agro-Industry at King Mongkut's Institute of Technology Ladkrabang (KMITL), Thailand

O9-2 Global significance of rice bran oil production

T. Miyazawa

Graduate School of Agricultural Science, Tohoku University, Japan

O9-3 Development of rice bran oil in Thailand: 37 years of experience

P. Santiwattana

Thai Edible Oil Co., Ltd., Thailand

O9-4 Modification of rice bran oil for utilization as margarine fats and shortenings

S. Sonwai

Department of Food Technology, Silpakorn University, Thailand

Tuesday, September 9, 2014

8:45-9:45 Keynote Lecture

Chair: K. Miyashita *(Faculty of Fisheries Sciences, Hokkaido University, Japan)*

L-2 Impact of food lipids in human nutrition

T. Miyazawa

Graduate School of Agricultural Science, Tohoku University, Japan

9:45-10:00 Coffee Break

10:00-12:00 Morning Session

Session-10 AOCS Asian Session

Organizer: S.H. Yoon *(Autel Co., Seoul, Korea)*

Chairs: S.H. Yoon *(Autel Co., Seoul, Korea)*

T. Nagao *(Biomaterials and Commodity Chemicals Research Division, Osaka Municipal Technical Research Institute, Japan)*

O10-1 Isolation and microencapsulation of fucoxanthin for drug delivery system of human lung cancer (H1299) cells line

I. Jaswir[1], D. Noviendri[1], M.T. Hamzah[1], M. Salleh[1], F. Muhamed[1], K. Miyashita[2]

[1]*Department of Biotechnology Engineering, International Islamic University Malaysia, Malaysia*

[2]*Faculty of Fisheries Sciences, Hokkaido University, Japan*

O10-2 Enteric lactoferrin attenuates the development of high-fat and high-cholesterol diet-induced hypercholesterolemia and atherosclerosis in microminipigs

T. Ono[1, 2], H. Kawaguchi[3], S. Morishita[1, 4], N. Miura[3], M. Murakoshi[1, 5], K. Sugiyama[1, 6], H. Kato[4], K. Miyashita[7], A. Tanimoto[3], H. Nishino[5, 6]

[1]*Lion Corporation, Japan*

[2]*Yokohama City University, Japan*

[3]*Kagoshima University, Japan*

[4]*The University of Tokyo, Japan*

[5]*Kyoto Prefectural University of Medicine, Japan*

[6]*Ritsumeikan University, Japan;*

[7]*Hokkaido University, Japan*

O10-3 Industrial production of functional lipids through lipase-mediated process based on its unique reaction mechanisms

T. Nagao, S. Tanaka, H. Nakano

Biomaterials and Commodity Chemicals Research Division, Osaka Municipal Technical Research Institute, Japan

O10-4 Results of the collaborative study on the new enzymatic method analyzing FA composition at sn-2 of triacylglycerols

Y. Watanabe[1], M. Asada[2], T. Arishima[3], Y. Iida[4], J. Imagi[5], K. Saito[6], A. Sasaki[7], R. Sasaki[8], S. Sato[9], C. Sato[7], T. Sano[5], T. Shibuya[2], T. Nagai[10], Y. Tsukahara[2], T. Fukazawa[4], R. Homma[6], R. Hori[5], Y. Miyazaki[11], A. Yamashita[12], K. Yoshinaga[10], S. Watanabe[3]

[1]*Osaka Municipal Technical Research Institute, Japan*

[2]*Showa Sangyo Co., Japan*

[3]*Fuji Oil Co., Japan*

[4]*Japan Institute of Oil & Fats, Other Foods Inspection, Japan,*

[5]*J-Oil Mills, Inc., Japan*

[6]*Kao Co., Japan*

[7]*The Nisshin OilliO Group, Japan*

[8]*Miyoshi Oil & Fat Co., Japan*

[9]*Japan Food Research Laboratories, Japan*

[10]*Tsukishima Foods Industry Co., Japan*

[11]*NOF Co., Japan*

[12]*ADEKA Co., Japan*

O10-5 Oxidative stability of perilla oils as affected by extraction methods

E. Choe[1], M.Y. Jung[2], S.H. Yoon[3]

[1]*Inha University, Korea*

[2]*Woosuk University, Korea*

[3]*Autel Co., Seoul, Korea*

Session-11 Construction of Fermentation System for Lipid Production

Organizer: T. Aki *(Graduate School of Advanced Sciences of Matter, Hiroshima University, Japan)*

Chairs: T. Aki *(Graduate School of Advanced Sciences of Matter, Hiroshima University, Japan)*

G.R. Dedeles *(Thomas Aquinas Research Complex, University of Santo Tomas, Philippines)*

O11-1 Aerobic degradation of PAHs pyrene, fluorene, and fluoranthene by saltern bacteria

G.R. Dedeles, C.L. Nanca

Thomas Aquinas Research Complex, University of Santo Tomas, Philippines

O11-2 Production of functional lipids using marine resources

T. Aki

Graduate School of Advanced Sciences of Matter, Hiroshima University, Japan

O11-3 Effect of dissolved oxygen levels on lipid accumulation in cultures of marine protist, *Aurantionchytrium* sp.

M. Chaisawang

Rajamangala University of Technology Rattanakosin, Thailand

O11-4 Possibility of thraustochytrids for industrial application

Y. Taoka, M. Hayashi

University of Miyazaki, Japan

O11-5 Microbial transformation of (+)- and (-)-α-pinenes

R. Motooka, M. Miyazawa

Faculty of Science and Engineering, Kinki University, Japan

Session-12 Auatic Lipids - Sources, Alternatives & Uses

Organizer: B. Narayan *(CSIR-Central Food Technological Research Institute, India)*

Chairs: B. Narayan *(CSIR-Central Food Technological Research Institute, India)*

M. Sreedharan *(Aasha Biochem, India)*

O12-1 Potential of fish processing wastes as sources of recoverable lipids: An overview of physiological effects of recovered lipids

A.K. Rai[1], S. Hathwar[1], A. Muhammed M[2], D.P. Mishra[2], B. Narayan[1]

[1]CSIR-Central Food Technological Research Institute, India

[2]CSIR-Central Drug Research Institute, India

O12-2 Squalene - A marine lipid in therapeutic application

M. Sreedharan

Aasha Biochem, India

O12-3 Therapeutic potential of lipid based aquatic biofunctional materials: neuroprotective & antivirulent effects of squalene

B.S.C. Bindu[1], D.P. Mishra[2], N. Bhaskar[1]

[1]CSIR-Central Food Technological Research Institute, India

[2]CSIR-Central Drug Research Institute, India

O12-4 Can squalene promote conversion of α-linoleic acid to docosahexanoic acid?

S.R. Kumar, M. Hosokawa, K. Miyashita

Faculty of Fisheries Sciences, Hokkaido University, Japan

O12-5 Oxidized fats and oils induces neurotoxicity relating pica behavior and locomotor activity

F. Kitamura[1], H. Watanabe[2], N. Gotoh[1]

[1]Tokyo University of Marine Science and Technology, Japan

[2]University of Kochi, Kochi, Japan

12:00-13:30 Lunch

13:30-15:30 Afternoon Session-1

Session-13 Biocatalytic Conversion of Lipids and Their Functionality

Organizer: Y. Iwasaki *(Nagoya University, Japan)*

Chairs: Y. Iwasaki *(Nagoya University, Japan)*

D. Sugimori *(Graduate School of Symbiotic Systems Science and Technology, Fukushima University, Japan)*

O13-1 Characterization of a lysoplasmalogen-specific phospholipase D and its application to diagnostic agent

D. Sugimori[1], Y. Matsumoto[1], S. Sakasegawa[2], H. Matsumoto[2]

[1]Graduate School of Symbiotic Systems Science and Technology, Fukushima University, Japan

[2]Asahi Kasei Pharma Corporation, Japan

O13-2 Efficacy of Soy PS as a beauty food ingredient

J.-J. Han[1], H.-D. Choi[2]

[1]Doosan Co., Korea

[2]Korea Food Research Institute, Korea

O13-3 Synthesis of novel functional phospholipids by phospholipase D-mediated transphosphatidylation

M. Hosokawa, K. Miyashita

Faculty of Fisheries Sciences, Hokkaido University, Japan

O13-4 Engineering DAG-like lipase to produce pure 1, 3-DAG

Y. Wang[1], Q. Wang[2], L. Liu[2], B. Yang[2]

[1]College of Light Industry and Food Sciences, South China University of Technology, China

[2]School of Bioscience and Bioengineering, South China University of Technology, China

O13-5 Development of phospholipase D having phosphatidylinositol-synthesizing activity

Y. Iwasaki, J. Damnjanović, H. Nakano

Nagoya University, Japan

Session-14 Surfactant Self-Assemblies - Fundamentals and Applications-1

Organizers: K. Aramaki *(Graduate School of Environment and Information Sciences, Yokohama National University, Japan)*

H. Sakai *(Faculty of Science and Technology, Tokyo University of Science, Japan)*

P. Rangsunvigit *(The Petroleum and Petrochemical College, Chulalongkorn University, Thailand)*

B. Kitiyanan *(The Petroleum and Petrochemical College, Chulalongkorn University, Thailand)*

R. B. N. Prasad *(Centre for Lipid Research CSIR-Indian Institute of Chemical Technology, India)*

Chairs: C.-H. Chang *(Department of Chemical Engineering, National Cheng Kung University, Taiwan)*

H. Sakai *(Faculty of Science and Technology, Tokyo University of Science, Japan)*

O14-1 Roles of Surface Treatment on Activated Carbon and Tetrahydrofuran on Methane Hydrate Formation

A. Siangsai, P. Rangsunvigit, B. Kitiyanan, S. Kulprathipanja

The Petroleum and Petrochemical College, Chulalongkorn University, Thailand

O14-2 Oil-in-liqid crysatal (O/LC) gel emulsions formed by nonioinic surfactant systems

K. Aramaki

Graduate School of Environment and Information Sciences, Yokohama National University, Japan

O14-3 Enhanced physical stability of catanionic vesicles fabricated from mixed ion pair amphiphile/double-chained ionic surfactant systems with the presence of cholesterol

C.-L. Tu, C.-J. Li, A.-T. Kuo, C.-H. Chang

Department of Chemical Engineering, National Cheng Kung University, Taiwan

O14-4 Amino acid-based surfactants: surface and self assembly properties and potential applications

R. B. N. Prasad

Centre for Lipid Research CSIR-Indian Institute of Chemical Technology, India

O14-5 Competitive adsorption of AOT and TWEEN 20 surfactant using quartz crystal microbalance

J. Thavorn, B. Kitiyanan, J.J. Hamon, A. Striolo, B.P. Grady

The Petroleum and Petrochemical College, Chulalongkorn University, Thailand

Session-15 Marine Lipids

Organizer: T.K.S. Gopal *(Central Institute of Fisheries Technology, India)*

Chairs: T.K.S. Gopal *(Central Institute of Fisheries Technology, India)*

U. Klinkesorn *(Department of Food Science and Technology Faculty of Agro-Industry, Kasetsart Univeristy, Thailand)*

O15-1 Nutritional significance of fish oils

T.K.S. Gopal, S. Mathew

Central Institute of Fisheries Technology, India

O15-2 Encapsulation, oxidation and in vitro digestion of fish oil-based multilayer emulsion

J. Sawasdikarn, S. Klongdee, Y. Kwamman, U. Klinkesorn

Department of Food Science and Technology Faculty of Agro-Industry, Kasetsart Univeristy, Thailand

O15-3 Marine lipids of deep sea fishes

S. Mathew, M. Mathew, T.K.S. Gopal

Central institute of Fisheries Technology, India

O15-4 Supplementation with eicosapentaenoic acid-rich fish oil improves exercise economy and reduces perceived exertion during submaximal steady state exercise in normal healthy untrained men

F. Kawabata[1], M. Neya[2], K. Hamazaki[3], Y. Watanabe[2], S. Kobayashi[4], T. Tsuji[5]

[1]Institute for Advanced Study, Kyushu University, Japan

[2]Graduate School of Arts and Sciences, The University of Tokyo, Japan

[3] Faculty of Medicine, University of Toyama, Japan

[4]Faculty of Pharmaceutical Sciences, Josai International University, Japan

[5]Human life science R&D center, Nippon Suisan Kaisha, Ltd., Japan

O15-5 Omega-3 DPA supplementation study: Effects on plasma lipids and plasma anti-inflammatory and pro-resolving lipid mediators

A.J. Sinclair, J. Markworth, D. Cameron-Smith, K. Linderborg, G. Kaur, K.R. Maddipati

Deakin University, Australia

15:30-15:45 Coffee Break

15:45-17:45 Afternoon Session-2

Session-16 Development of Bio-based Functional Chemicals from Renewable Resources

Organizer: D. Kitamoto *(National Institute of Advanced Industrial Science and Technology (AIST), Japan)*

Chairs: D. Kitamoto *(National Institute of Advanced Industrial Science and Technology (AIST), Japan)*

M. Tsumadori *(Kao Corporation, Japan)*

O16-1 Structure-function relationship of yeast glycolipid biosurfactants, mannosylerythritol lipids (MEL)

T. Fukuoka, T. Morita, T. Imura, D. Kitamoto

National Institute of Advanced Industrial Science and Technology (AIST), Japan

O16-2 Microbial synthesis of biodegradable polymers from renewable resources in Malaysia

K. Sudesh

School of Biological Sciences, Universiti Sains Malaysia Penang, Malaysia

O16-3 Bio-based functional polymers from plant oils

H. Uyama

Graduate School of Engineering, Osaka University, Japan

O16-4 The barrier properties of bio-based polyester nanocomposite films

Y.-M. Sun[1,2], C.-H. Lan[1], C.-Y. Huang[1], X.-T. Chen[1], C.-Y. Yen[1]

[1]Department of Chemical Engineering and Materials Science, Yuan Ze University, Taiwan

[2]Research and Development Center for Membrane Technology, Chung Yuan University, Taiwan

O16-5 Microalgae for sustainable oil production

T. Ozaki, H. Endou, F. Takahashi, A. Kawahara, T. Toujou, Y. Takimura, H. Hagihara

Kao Corporation R&D Biological Science Research, Japan

Session-17 Surfactant Self-Assemblies - Fundamentals and Applications-2

Organizers: K. Aramaki *(Graduate School of Environment and Information Sciences, Yokohama National University, Japan)*

H. Sakai *(Faculty of Science and Technology, Tokyo University of Science, Japan)*

P. Rangsunvigit *(The Petroleum and Petrochemical College, Chulalongkorn University, Thailand)*

B. Kitiyanan *(The Petroleum and Petrochemical College, Chulalongkorn University, Thailand)*

R. B. N. Prasad *(Centre for Lipid Research CSIR-Indian Institute of Chemical Technology, India)*

Chairs: P. Rangsunvigit *(Central Institute of Fisheries Technology, India)*

K. Aramaki *(Graduate School of Environment and Information Sciences, Yokohama National University, Japan)*

O17-1 Insight from fundamental studies of carbohydrate liquid crystals for applications from drug delivery, diagnostic, to membrane mimetic

R. Hashim

Chemistry Department, University of Malaya, Malaysia

O17-2 New generation cationic surfactants: synthesis, self-assembly and bio-physicochemical properties

S. Singh

Department of Chemistry –UGC Sponsored Centre for Advance Studies – I, Guru Nanak Dev University, India

O17-3 Self-assembly of cationic and anionic disc bicelles with DNA

T.-L. Lin[1], Y. Hu[1], P.-W. Yang[1], C.-H. Yang[1], T.-Y. Lin[1], U.-S. Jeng[2]

[1]*Department of Engineering and System Science, National Tsing Hua University, Taiwan*

[2]*National Synchrotron Radiation Research Center (NSRRC), Taiwan*

O17-4 Evaluation of the hydrophilic lipophilic balance of food and cosmetic surfactants using the phase inversion temperature of C10E4/n-octane/water emulsions.

C. Pierlot, J. Ontiveros, M. Catté, V. Molinier, J.-L. Salager, J.-M. Aubry

Université Lille Nord de France, France

O17-5 Solution Properties and Phase Behaviors of Gemini-Surfactant like Ion Complexes formed by Alkylamine and Dicarboxylic acid

H. Sakai[1,2], A. Manabe[1], Y. Okabe[1], K. Tsuchiya[3], T. Endo[1,2], K. Sakai[1,2], M. Abe[2]

[1]*Faculty of Science and Technology, Tokyo University of Science, Japan*

[2]*Research Institute of Science and Technology, Tokyo University of Science, Japan*

[3]*Faculty of Engineering, Tokyo University of Science, Japan*

Session-18 Fish oil, Omega 3 Fatty Acids and Their Biological Functions

Organizer: F.-Y. Tang *(Department of Nutrition, China Medical University, Taiwan, Republic of China)*

Chairs: F.-Y. Tang *(Department of Nutrition, China Medical University, Taiwan, Republic of China)*

E.-P.I. Chiang *(Food Science and Biotechnology, National Chung Hsing University, Taiwan)*

O18-1 Powdered fish oil: It's significance in food and nutrition

K. Nakagawa[1], T. Miyazawa[1,2]

[1]*Graduate School of Agricultural Science, Tohoku University, Japan*

[2]*Food Biotechnology Innovation Project, NICHe, Tohoku University, Japan*

O18-2 Fish oil alters 1-carbon kinetics in vitro and in vivo

H.-A. Ko, C.-C. Hu, Y.-H. Huang, Y.-S. Wu, F.-Y. Tang, E.-P.I. Chiang

Food Science and Biotechnology, National Chung Hsing University, Taiwan

O18-3 Fish oil: An elixir in prevention of colorectal cancer

N. Agnihotri, P. Sarotra, S. Kansal, G. Sharma

Department of Biochemistry, Panjab University, India

O18-4 Fish oil consumption prevents ischemic injury through the augmentation of neovasculogenesis

J.-N. Syu, F.-Y. Wang, C.-C. Cheng, F.-Y. Tang

Department of Nutrition, China Medical University, Taiwan, Republic of China

O18-5 The beneficial role of 4-hydroxy hexenal (4-HHE) in the endothelial function in vivo

K. Morino, F. Nakagawa, K. Kondo, A. Ishikado, T. Okada, O. Sekine, Y. Nishio, A. Kashiwagi, S. Ugi, H. Maegawa,

Shiga University of Medical Science, Japan

Wednesday, September 10, 2014

8:45-11:45 Morning Session

Session-19 Lipid Analysis and Emulsions

Organizer: N. Gotoh *(Department of Food Science and Technology, Tokyo University of Marine Science and Technology, Japan)*

Chair: N. Gotoh *(Department of Food Science and Technology, Tokyo University of Marine Science and Technology, Japan)*

O19-1 Concise α-oxidation of β-dicarbonyl compounds

H. Asahara, N. Nishiwaki,

Kochi University of Technology, Japan

O19-2 A rapid indirect method for simultaneous determinations of 2-/3-MCPD esters and glycidyl esters in edible oils.

M. Ebina, K. Miyazaki, N. Saori, H. Sasako, K. Koyama

House Foods Group Inc., Japan

O19-3 EPR Imaging determines locations of radical species in black pepper seeds

K. Nakagawa[1], B. Epel[2]

[1]*Graduate School of Health Sciences, Hirosaki University, Japan*

[2]*Department of Radiation and Cellular Oncology, The University of Chicago, USA*

O19-4 Determination of liquid entrainment in palm oil fractionation based on triacylglycerol composition

E. Hishamuddin[1,2], Z.K. Nagy[2], A.G.F. Stapley[2]

[1]Malaysian Palm Oil Board, Malaysia

[2]Loughborough University, United Kingdom

O19-5 Evaluation of electrostatic interaction between lecithin and chitosan in two-layers emulsion by NMR spectroscopy

Y. Kwamman[1], S. Matsukawa[2], U. Klinkesorn[1]

[1]Faculty of Agro-Industry, Kasetsart University, Thailand

[2]Department of Food Science and Technology, Tokyo University of Marine Science and Technology, Japan

O19-6 Modeling of field assisted phase de-mixing of oil emulsions/dispersions

H.A. Tavanandi, N. Amrutha, K.S.M.S. Raghavarao

Department of Food Engineering, CSIR-Central Food Technological Research Institute, India

O19-7 Hydrotrope induced shape transitions in supercritical CO_2 microemulsions

C. James[1], M. Hopkins-Hatzopoulos[2], T. Narumi[1], A. Yoshizawa[1], J. Easto[2], M. Sagisaka[1]

[1]Hirosaki University, Japan

[2]University of Bristol, UK

O19-8 Micellization studies of anionic gemini surfactant in the presence of various salts

N. Kumar, R. Tyagi

Department of Chemical Engineering, Jaypee University of Engineering & Technology, India

Session-20 Detergents and Interface Science

Organizer: H. Sakai *(Faculty of Science and Technology, Tokyo University of Science, Japan)*

Chairs: H. Sakai *(Faculty of Science and Technology, Tokyo University of Science, Japan)*

K. Sakai *(Faculty of Science and Technology, Tokyo University of Science, Japan)*

K. Aramaki *(Graduate School of Environment and Information Sciences, Yokohama National University, Japan)*

O20-1 Synthesis and properties of new quinuclidinolium surfactants

A. Bhadani, T. Endo, K. Sakai, M. Abe, H. Sakai

Department of Pure and Applied Chemistry, Tokyo University of Science, Japan

O20-2 Novel phosphate gemini prepared via McMurry coupling and phosphorylation

T. Oida, Y. Takamiya, T. Namba, T. Kawase

Kyoto Institute of Technology, Japan

O20-3 Wetting dynamics of colloidal dispersions on biomimetic surfaces

E. Seino[1], S. Chida[1], H. Mayama[2], J. Hotta[1], Y. Nonomura[1]

[1]Yamagata University, Japan,

[2]Asahikawa Medical University, Japan

O20-4 Molecular interactions in mixed Langmuir monolayers of ion pair amphiphile with double-chained anionic surfactant

H.-T. Yan, C.-W. Liu, C.-H. Chang

Department of Chemical Engineering, National Cheng Kung University, Taiwan

O20-5 Novel universal parameter to define surfactant characteristics

Y. Yamashita, C. Indo, H. Tsuchiya, K. Sakamoto

Faculty of Pharmacy, Chiba Institute of Science, Japan

O20-6 Effect of zeta potentials by physicochemical surface modifications on BSA and lysozyme adsorption to TZP surfaces *in vitro*

N. Miyake[1], T. Miura[2], S. Yamashita[1], T. Sato[3], M. Yoshinari[2], Y. Tomita[4]

[1]Department of Clinical Oral Health Science, Tokyo Dental College, Japan

[2]Oral Health Science Center, Tokyo Dental College, Japan

[3]Department of Crown & Bridge Prosthodontics, Tokyo Dental College, Japan

[4]Tokyo Dental College, Japan

O20-7 Autonomous motion of oil-in-water droplets in solution of biodegradable cationic surfactants

T. Banno[1], S. Miura[1], T. Toyota[1,2]

[1]Department of Basic Science, The University of Tokyo, Japan

[2]PRESTO, JST, Japan

Session-21 Oil Production, Lipid Nutrition and Biological Activity

Organizer: K. Miyashita *(Faculty of Fisheries Sciences, Hokkaido University, Japan)*

Chair: K. Miyashita *(Faculty of Fisheries Sciences, Hokkaido University, Japan)*

O21-1 Isothermal dry fractionation of rambutan (Nephelium lappaceum L.) kernel fat

B. Mahisanunt, U. Klinkesorn

Faculty of Agro-Industry, Kasetsart University, Thailand

O21-2 Hot compressed water extraction of palm oil mesocarp

N.A. Morad, M.S. Md Sarip, M.K. Abd Aziz, Y. Yamashita, M.N. Iman ,

Malaysian-Japan International Institute of Technology (MJIIT), Universiti Teknologi Malaysia(UTM), Malaysia

O21-3 Extraction of squalene from palm oil mesocarp using super critical carbon dioxide

M.A.C. Yunus, C.X. Long, S. Zhari, L.N. Yian, W.A.W. A. Aziz, Z. Idham

Faculty of Chemical Engineering, Universiti Teknologi Malaysia, Malaysia

O21-4 Immobilized phospholipase A1-catalyzed modification

T.T. Zhao, D.S. No, I.-H. Kim

Department of Public Health Sciences, Korea University, Korea

O21-5 Comparison of catabolic rates of ^{13}C-labeled palmitic acid bound to the α and β positions of triacylglycerol using CO_2 expired from mice

T. Kawamatsu[1], K. Konno[1], H. Mizobe[2], T. Nagai[2], K. Yoshinaga[2], K. Kojima[2], F. Beppu[1], N. Gotoh[1]

[1]*Tokyo University of Marine Science and Technology, Japan*

[2]*Tsukishima Foods Industry Co. Ltd., Japan*

O21-6 Fatty acid composition of placentae in Japanese pregnant

F. Kimura[1], I. Yamazaki[1], K. Nakagawa[1], K. Nakai[2], T. Kawabata[3], T. Arima[4], S. Saitoh[5], S. Mizuno[5], N. Yaegashi[5], T. Miyazawa[1,6]

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[2]*Department of Development and Environmental Medicine, Environment and Genome Research Center, Tohoku University Graduate School of Medicine, Japan*

[3]*Faculty of Nutrition, Kagawa Nutrition University, Japan*

[4]*Department of Informative Genetics, Environment and Genome Research Center, Tohoku University Graduate School of Medicine, Japan*

[5]*Department of Gynecology and Ostetrics, Tohoku University Graduate School of Medicine, Japan,*

[6]*Food Biotechnology Innovation Project, NICHe, Tohoku University, Japan*

O21-7 Siphonaxanthin, a marine carotenoid from green algae, suppresses mast cell degranulation via an alteration of sphingomyelin metabolism

Y. Manabe[1], T. Hirata[1,2], T. Sugawara[1]

[1]Graduate School of Agriculture, Kyoto University, Japan

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